

module 314 then adjusts R_{m3} and θ_{m3} according to brightness B_a . For example, if the ambient brightness is at a maximum level, R_{m3} and θ_{m3} may be decreased, and if the ambient brightness is at a minimum level, R_{m3} and θ_{m3} may be increased. Visibility envelope module 314 may provide the adjusted visibility envelope information $R_{m3'}$ and $\theta_{m3'}$ to intruder analysis module 308.

[0048] In one embodiment, visibility envelope module 314 receives from configuration data 312 a range R_{m4} and a viewing angle θ_{m4} . Range R_{m4} represents a maximum range over which an electronic media display (e.g. electronic media display 400) may be viewed such that the electronic media display's contents may be resolved. Viewing angle θ_{m4} represents a maximum angle over which an electronic media display (e.g. electronic media display 400) may be viewed such that the electronic media display's contents may be resolved. Additionally, visibility envelope module 314 receives a content type description of the primary content type that is being displayed on the electronic media display. Visibility envelope module 314 then adjusts R_{m4} and θ_{m4} according to the content type. For example, if the content type is photographic content, R_{m4} and θ_{m4} may be increased. If the content type is textual content, R_{m4} and θ_{m4} may be decreased. Visibility envelope module 314 may provide the adjusted visibility envelope information $R_{m4'}$ and $\theta_{m4'}$ to intruder analysis module 308.

[0049] Intruder analysis module 308 receives visibility envelope information from visibility envelope module 314, and intruder analysis module 308 receives a user preference file from preference data 310. Additionally, intruder analysis module 308 receives sensor information, which is provided by the sensor (e.g. sensor 200) through input 320. In an embodiment that utilizes the visibility envelope features described herein, intruder analysis module 308 uses the received visibility enveloped information in performing its analysis. Intruder analysis module 308 scans the input for viewers, and classifies them as either intruders or safe viewers. Intruder analysis module 308 also scans the input for cameras or camera-equipped devices (e.g., SLR cameras, camera-equipped cellular phones, point-and-shoot cameras, building-mounted camera systems, etc.). Intruder analysis module 308 may classify an object as a viewer or camera using any number of detection algorithms. For example, intruder analysis module 308 may apply motion detection algorithms on the sensor information, and may classify any moving object as a viewer. As another example, intruder analysis module 308 may apply shape detection algorithms that scans the sensor information for lens (e.g., circular) shapes. As another example, intruder analysis module 308 may apply shape detection algorithms that scans the sensor information to determine whether a detected camera has a lens cap emplaced; in this case it may not be considered as an intruder. As another example, intruder analysis module 308 may apply shape detection algorithms that scans the sensor information to determine the orientation of a detected camera. The camera's orientation may include an angle between the camera's imaging direction and a line of sight from the camera to the electronic media display device. The camera's status as an intruder may be based on whether or not it is pointing towards the electronic media display device. As another example, intruder analysis module 308 may apply facial recognition algorithms on the sensor information, and may classify any detected faces as viewers. As another example, intruder analysis module 308 may compare an

object to a database of camera specification information, and may implement pattern matching algorithms using the object's dimensions or characteristics.

[0050] Intruder analysis module 308 analyzes any detected viewers to determine each viewer's range and location information. A viewer's range and location information may be determined by any number of range-finding and location-finding algorithms. The systems and methods of the present disclosure are not limited based on the type of range-finding and location-finding algorithms. Intruder analysis module 308 may compare a viewer's range and location to the bounds of the visibility envelope. For example, if a viewer's range is greater than the visibility envelope's range, intruder analysis module 308 may not classify the viewer as an intruder. As another example, if a viewer's location is such that the viewer has a viewing angle greater than the visibility envelope's maximum viewing angle, intruder analysis module 308 may not classify the viewer as an intruder. As another example, if a viewer is located 20 ft. from the display device, and the visibility envelope has a maximum range of 15 ft., the viewer would not be classified as an intruder. For viewers that are within the bounds of the visibility envelope, intruder analysis module 308 may perform additional analysis as discussed below.

[0051] Intruder analysis module 308 may use any number of algorithms to determine that the user is not an intruder. As a simple example, intruder analysis module 308 may classify the closest viewer as a safe user. As another example, intruder analysis module 308 may classify a partially obscured viewer as an intruder. As another example, intruder analysis module 308 may determine demographics of the viewer (e.g., age, sex, race) and compare these to those of safe user demographics as specified by a user preferences file to classify the viewer as either a safe user or as an intruder; for instance all children within the visibility envelope may be classified as intruders. As another example, intruder analysis module 308 may apply additional facial recognition algorithms on any detected viewers. Intruder analysis module 308 may compare a detected viewer's face to a set of safe user faces as specified by a user preferences file (e.g. preference data 310). Intruder analysis module 308 may then determine whether the detected viewer has a face that is within the set of safe user faces, if so, intruder analysis module 308 may not classify that viewer as an intruder. Intruder analysis module 308 may further use algorithms to detect the eye-state or red-eye response of a viewer. Intruder analysis module 308 may use the eye information to restrict classifying a viewer with closed eyes as an intruder. Intruder analysis module 308 may then provide the results of the analysis to edit generation module 316.

[0052] Intruder analysis module 308 analyzes any detected cameras to determine each camera's range and location information. A camera's range and location information may be determined by any number of range-finding and location-finding algorithms. The systems and methods of the present disclosure are not limited based on the type of range-finding and location-finding algorithms. Intruder analysis module 308 may compare a camera's range and location to the bounds stored within a preferences file (e.g., configuration data 312, preference data 310) or compare a camera's range and location data to default values. For example, if a camera's range is greater than the maximum range, intruder analysis module 308 may not consider a camera as an intruder. As another example, if a camera's location is such that the camera is at an